



<110> Heston, Warren D.W.  
O'Keefe, Denise S.

<120> DNA Encoding the Prostate-Specific Membrane  
Antigen-Like Gene and Uses Thereof

<130> D6230

<140> USSN 09/973,382

<141> 2001-10-09

<150> PCT/US00/09417

<151> 2000-04-09

<160> 38

<210> 1

<211> 1992

<212> DNA

<213> *Homo sapiens*

<220>

<223> cDNA sequence of PSMA-like gene

<400> 1

agcaaatact	cactaccaca	aataagaaca	tttccaaatc	tgatgttctg	50
aggattttta	gagcttatag	tagcaaaaag	aaaagggaaa	ttctctctga	100
gatgtccttt	tttgtaggcc	taatgacaaa	aggttgaaga	taaagttcta	150
gtactcattt	aagtgttaata	ttgaaaattg	atattaccaa	atctggaaca	200
accaatttaa	aataaggaaa	gaaagacact	gtgttttcta	ggtaaaaaat	250
gccagctgg	caggggccaa	aggagtcatt	ctctactcag	accctgctga	300
ctactttgct	cctgggggtga	agtcctatcc	agacggttgg	aatcttcctg	350
gaggtggtgt	ccagcgtgga	aatatcctaa	atctgaatgg	tgcaggagac	400
cctctcacac	caggttaccc	agcaaataga	tacgcttata	ggcatggaat	450
tgcagaggct	gttggtcttc	caagtattcc	tggtcatcca	gttggatact	500
atgatgcaca	gaagctccta	gaaaaaatgg	gtggctcagc	accaccagat	550
agcagctgga	gaggaagtct	caaagtgtcc	tacaatgttg	gacctggctt	600
tactggaaac	ttttctacac	aaaaagtcaa	gatgcacatc	cactctacca	650
atgaagtgac	gagaattttac	aatgtgatag	gtactctcag	aggagcagtg	700
gaaccagaca	gatatgtcat	tctgggaggt	caccgggact	catgggtggt	750
tggtggtatt	gaccctcaga	gtggagcagc	tggtgttcat	gaaactgtga	800
ggagcttttg	aacactgaaa	aaggaagggt	ggagacctag	aagaacaatt	850
ttgtttgcaa	gctgggatgc	agaagaattt	ggtcttcttg	gttctactga	900
gtgggcagag	gataattcaa	gactccttca	agagcgtggc	gtggcttata	950
ttaatgctga	ctcatctata	gaaggaaact	acactctgag	agttgattgt	1000
acaccactga	tgtacagctt	ggtatacaac	ctaacaaaag	agctgaaaag	1050
ccctgatgaa	ggctttgaag	gcaaatctct	ttatgaaagt	tggactaaaa	1100
aaagtccttc	cccagagttc	agtggcatgc	ccaggataag	caaattggga	1150
tctggaaatg	attttgaggt	gttcttccaa	cgacttggaa	ttgcttcagg	1200
cagagcacgg	tatactaaaa	attgggaaac	aaacaaattc	agcggctatc	1250
cactgtatca	cagtgtctat	gaaacatatg	agttggtgga	aaagttttat	1300

RECEIVED

JUL 24 2003

TECH CENTER 1600/2900

```

gatccaatgt ttaaatatca cctcactgtg gcccaggttc gaggagggat 1350
ggtgttttgag ctagccaatt ccatagtgct cccttttgat tgtcgagatt 1400
atgctgtagt tttaagaaag tatgctgaca aaatctacaa tatttctatg 1450
aaacatccac aggaaatgaa gacatacagt ttatcatttg attcactttt 1500
ttctgcagta aaaaatttta cagaaattgc ttccaagttc agcgagagac 1550
tccaggactt tgacaaaagc aacccaatat tgttaagaat gatgaatgat 1600
caactcatgt ttctggaaag agcatttatt gatccattag ggttaccaga 1650
cagacctttt tataggcatg tcattctatgc tccaagcagc cacaacaagt 1700
atgcagggga gtcattccca ggaatttatg atgctctgtt tgatattgaa 1750
agcaaagtgg acccttccaa ggcctgggga gatgtgaaga gacagatttc 1800
tggtgcagcc ttcacagtgc aggcagctgc agagactttg agtgaagtag 1850
cctaagagga ttcttttagag actctgtatt gaatttgtgt ggtatgtcac 1900
tcaaagaata ataatgggta tattgataaa ttttaaaatt ggtatatttg 1950
aaataaagtt gaatattata tataaaaaaa aaaaaaaaaa aa 1992

```

```

<210>      2
<211>     442
<212>     PRT
<213>     Homo sapiens

```

```

<220>
<223>     deduced amino acid sequence of PSMA-like
           protein

```

```

<400>      2
Met Gly Gly Ser Ala Pro Pro Asp Ser Ser Trp Arg Gly Ser Leu
           5                      10                      15
Lys Val Ser Tyr Asn Val Gly Pro Gly Phe Thr Gly Asn Phe Ser
           20                      25                      30
Thr Gln Lys Val Lys Met His Ile His Ser Thr Asn Glu Val Thr
           35                      40                      45
Arg Ile Tyr Asn Val Ile Gly Thr Leu Arg Gly Ala Val Glu Pro
           50                      55                      60
Asp Arg Tyr Val Ile Leu Gly Gly His Arg Asp Ser Trp Val Phe
           65                      70                      75
Gly Gly Ile Asp Pro Gln Ser Gly Ala Ala Val Val His Glu Thr
           80                      85                      90
Val Arg Ser Phe Gly Thr Leu Lys Lys Glu Gly Trp Arg Pro Arg
           95                     100                     105
Arg Thr Ile Leu Phe Ala Ser Trp Asp Ala Glu Glu Phe Gly Leu
          110                     115                     120
Leu Gly Ser Thr Glu Trp Ala Glu Asp Asn Ser Arg Leu Leu Gln
          125                     130                     135

```

Glu Arg Gly Val Ala Tyr Ile Asn Ala Asp Ser Ser Ile Glu Gly  
 140 145 150  
 Asn Tyr Thr Leu Arg Val Asp Cys Thr Pro Leu Met Tyr Ser Leu  
 155 160 165  
 Val Tyr Asn Leu Thr Lys Glu Leu Lys Ser Pro Asp Glu Gly Phe  
 170 175 180  
 Glu Gly Lys Ser Leu Tyr Glu Ser Trp Thr Lys Lys Ser Pro Ser  
 185 190 195  
 Pro Glu Phe Ser Gly Met Pro Arg Ile Ser Lys Leu Gly Ser Gly  
 200 205 210  
 Asn Asp Phe Glu Val Phe Phe Gln Arg Leu Gly Ile Ala Ser Gly  
 215 220 225  
 Arg Ala Arg Tyr Thr Lys Asn Trp Glu Thr Asn Lys Phe Ser Gly  
 230 235 240  
 Tyr Pro Leu Tyr His Ser Val Tyr Glu Thr Tyr Glu Leu Val Glu  
 245 250 255  
 Lys Phe Tyr Asp Pro Met Phe Lys Tyr His Leu Thr Val Ala Gln  
 260 265 270  
 Val Arg Gly Gly Met Val Phe Glu Leu Ala Asn Ser Ile Val Leu  
 275 280 285  
 Pro Phe Asp Cys Arg Asp Tyr Ala Val Val Leu Arg Lys Tyr Ala  
 290 295 300  
 Asp Lys Ile Tyr Asn Ile Ser Met Lys His Pro Gln Glu Met Lys  
 305 310 315  
 Thr Tyr Ser Leu Ser Phe Asp Ser Leu Phe Ser Ala Val Lys Asn  
 320 325 330  
 Phe Thr Glu Ile Ala Ser Lys Phe Ser Glu Arg Leu Gln Asp Phe  
 335 340 345  
 Asp Lys Ser Asn Pro Ile Leu Leu Arg Met Met Asn Asp Gln Leu  
 350 355 360  
 Met Phe Leu Glu Arg Ala Phe Ile Asp Pro Leu Gly Leu Pro Asp  
 365 370 375  
 Arg Pro Phe Tyr Arg His Val Ile Tyr Ala Pro Ser Ser His Asn  
 380 385 390

Lys Tyr Ala Gly Glu Ser Phe Pro Gly Ile Tyr Asp Ala Leu Phe  
395 400 405  
Asp Ile Glu Ser Lys Val Asp Pro Ser Lys Ala Trp Gly Asp Val  
410 415 420  
Lys Arg Gln Ile Ser Val Ala Ala Phe Thr Val Gln Ala Ala Ala  
425 430 435  
Glu Thr Leu Ser Glu Val Ala  
440

<210> 3  
<211> 2653  
<212> DNA  
<213> *Homo sapiens*

<220>  
<223> nucleotide sequence of human PSMA gene

<300>  
<308> GenBank Accession No. M99487  
<309>

<400> 3  
ctcaaaaggg gccggatttc cttctcctgg aggcagatgt tgcctctctc 50  
tctcgctcgg attggttcag tgcactctag aaacactgct gtggtggaga 100  
aactggaccc caggtctgga gcgaattcca gcctgcaggg ctgataagcg 150  
aggcattagt gagattgaga gagactttac cccgccgtgg tggttggagg 200  
gcgcgcagta gagcagcagc acaggcgcgg gtcccgggag gccggctctg 250  
ctcgcgccga gatgtggaat ctcccttcacg aaaccgactc ggctgtggcc 300  
accgcgcgcc gcccgcgctg gctgtgcgct ggggcgctgg tgctggcggg 350  
tggcttcttt ctccctcggt tctctctcgg gtggtttata aaatcctcca 400  
atgaagctac taacattact ccaaagcata atatgaaagc atttttggat 450  
gaattgaaag ctgagaacat caagaagtgc ttatataatt ttacacagat 500  
accacattta gcaggaacag aacaaaactt tcagcttgca aagcaaattc 550  
aatcccagtg gaaagaattt ggcctggatt ctgttgagct agcacattat 600  
gatgtcctgt tgtcctaccc aaataagact catcccaact acatctcaat 650  
aattaatgaa gatggaaatg agattttcaa cacatcatta tttgaaccac 700  
ctcctccagg atatgaaaat gtttcggata ttgtaccacc tttcagtgct 750  
ttctctcctc aaggaatgcc agagggcgat ctagtgtatg ttaactatgc 800  
acgaactgaa gacttcttta aattggaacg ggacatgaaa atcaattgct 850  
ctgggaaaat tgtaattgcc agatatggga aagttttcag aggaaataag 900  
gttaaaaatg cccagctggc aggggcaaaa ggagtcattc tctactccga 950  
ccctgctgac tactttgctc ctggggtgaa gtcctatcca gatgggttga 1000  
atcttcctgg aggtggtgtc cagcgtggaa atatcctaaa tctgaatggt 1050  
gcaggagacc ctctcacacc aggttaccca gcaaatgaat atgcttatag 1100  
gcgtggaatt gcagaggctg ttggtcttcc aagtattcct gttcatccaa 1150  
ttggatacta tgatgcacag aagctcctag aaaaaatggg tggctcagca 1200  
ccaccagata gcagctggag aggaagtctc aaagtgcctt acaatggttg 1250

acctggccttt actggaaact tttctacaca aaaagtcaag atgcacatcc 1300  
 actctaccaa tgaagtgaca agaatttaca atgtgatagg tactctcaga 1350  
 ggagcagtgg aaccagacag atatgtcatt ctgggaggtc accgggactc 1400  
 atgggtgttt ggtggtattg accctcagag tggagcagct gttgttcatg 1450  
 aaattgtgag gagcttttga acactgaaaa aggaaggggtg gagacctaga 1500  
 agaacaattt tgttttgaag ctgggatgca gaagaatttg gtcttcttgg 1550  
 ttctactgag tgggcagagg agaattcaag actccttcaa gagcgtggcg 1600  
 tggcttataat taatgctgac tcatctatag aaggaaacta cactctgaga 1650  
 gttgattgta caccgctgat gtacagcttg gtacacaacc taacaaaaga 1700  
 gctgaaaagc cctgatgaag gctttgaagg caaatctctt tatgaaagtt 1750  
 ggactaaaaa aagtccttcc ccagagttca gtggcatgcc caggataagc 1800  
 aaattgggat ctggaaatga ttttgaggtg ttcttccaac gacttggaaat 1850  
 tgcttcaggc agagcacggt atactaaaaa ttgggaaaca aacaaattca 1900  
 gcggctatcc actgtatcac agtgtctatg aaacatatga gttggtggaa 1950  
 aagttttatg atccaatggt taaatatcac ctactgtgg cccaggttcg 2000  
 aggagggatg gtgtttgagc tagccaattc catagtgtc ccttttgatt 2050  
 gtcgagatta tgctgtagtt ttaagaaagt atgtgacaa aatctacagt 2100  
 atttctatga aacatccaca ggaaatgaag acatacagt tatcatttga 2150  
 ttcacttttt tctgcagtaa agaattttac agaaattgct tccaagttca 2200  
 gtgagagact ccaggacttt gacaaaagca acccaatagt attaagaatg 2250  
 atgaatgatc aactcatggt tctggaaaga gcatttattg atccattagg 2300  
 gttaccagac aggccttttt ataggcatgt catctatgct ccaagcagcc 2350  
 acaacaagta tgcaggggag tcattcccag gaatttatga tgctctgttt 2400  
 gatattgaaa gcaaagtgga cccttccaag gcctggggag aagtgaagag 2450  
 acagatttat gttgcagcct tcacagtgca ggcagctgca gagactttga 2500  
 gtgaagtagc ctaagaggat tcttttagaga atccgtattg aatttgtgtg 2550  
 gtatgtcact cagaaagaat cgtaatgggt atattgataa attttaaaat 2600  
 tggatatatt gaaataaagt tgaatattat atataaaaaa aaaaaaaaaa 2650  
 aaa 2653

<210> 4  
 <211> 750  
 <212> PRT  
 <213> *Homo sapiens*

<220>  
 <223> deduced amino acid sequence of PSMA protein

<400> 4  
 Met Trp Asn Leu Leu His Glu Thr Asp Ser Ala Val Ala Thr Ala  
 5 10 15  
 Arg Arg Pro Arg Trp Leu Cys Ala Gly Ala Leu Val Leu Ala Gly  
 20 25 30  
 Gly Phe Phe Leu Leu Gly Phe Leu Phe Gly Trp Phe Ile Lys Ser  
 35 40 45  
 Ser Asn Glu Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala  
 50 55 60

Phe Leu Asp Glu Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu Tyr  
 65 70 75  
 Asn Phe Thr Gln Ile Pro His Leu Ala Gly Thr Glu Gln Asn Phe  
 80 85 90  
 Gln Leu Ala Lys Gln Ile Gln Ser Gln Trp Lys Glu Phe Gly Leu  
 95 100 105  
 Asp Ser Val Glu Leu Ala His Tyr Asp Val Leu Leu Ser Tyr Pro  
 110 115 120  
 Asn Lys Thr His Pro Asn Tyr Ile Ser Ile Ile Asn Glu Asp Gly  
 125 130 135  
 Asn Glu Ile Phe Asn Thr Ser Leu Phe Glu Pro Pro Pro Pro Gly  
 140 145 150  
 Tyr Glu Asn Val Ser Asp Ile Val Pro Pro Phe Ser Ala Phe Ser  
 155 160 165  
 Pro Gln Gly Met Pro Glu Gly Asp Leu Val Tyr Val Asn Tyr Ala  
 170 175 180  
 Arg Thr Glu Asp Phe Phe Lys Leu Glu Arg Asp Met Lys Ile Asn  
 185 190 195  
 Cys Ser Gly Lys Ile Val Ile Ala Arg Tyr Gly Lys Val Phe Arg  
 200 205 210  
 Gly Asn Lys Val Lys Asn Ala Gln Leu Ala Gly Ala Lys Gly Val  
 215 220 225  
 Ile Leu Tyr Ser Asp Pro Ala Asp Tyr Phe Ala Pro Gly Val Lys  
 230 235 240  
 Ser Tyr Pro Asp Gly Trp Asn Leu Pro Gly Gly Gly Val Gln Arg  
 245 250 255  
 Gly Asn Ile Leu Asn Leu Asn Gly Ala Gly Asp Pro Leu Thr Pro  
 260 265 270  
 Gly Tyr Pro Ala Asn Glu Tyr Ala Tyr Arg Arg Gly Ile Ala Glu  
 275 280 285  
 Ala Val Gly Leu Pro Ser Ile Pro Val His Pro Ile Gly Tyr Tyr  
 290 295 300  
 Asp Ala Gln Lys Leu Leu Glu Lys Met Gly Gly Ser Ala Pro Pro  
 305 310 315

Asp Ser Ser Trp Arg Gly Ser Leu Lys Val Pro Tyr Asn Val Gly  
 320 325 330  
 Pro Gly Phe Thr Gly Asn Phe Ser Thr Gln Lys Val Lys Met His  
 335 340 345  
 Ile His Ser Thr Asn Glu Val Thr Arg Ile Tyr Asn Val Ile Gly  
 350 355 360  
 Thr Leu Arg Gly Ala Val Glu Pro Asp Arg Tyr Val Ile Leu Gly  
 365 370 375  
 Gly His Arg Asp Ser Trp Val Phe Gly Gly Ile Asp Pro Gln Ser  
 380 385 390  
 Gly Ala Ala Val Val His Glu Ile Val Arg Ser Phe Gly Thr Leu  
 395 400 405  
 Lys Lys Glu Gly Trp Arg Pro Arg Arg Thr Ile Leu Phe Ala Ser  
 410 415 420  
 Trp Asp Ala Glu Glu Phe Gly Leu Leu Gly Ser Thr Glu Trp Ala  
 425 430 435  
 Glu Glu Asn Ser Arg Leu Leu Gln Glu Arg Gly Val Ala Tyr Ile  
 440 445 450  
 Asn Ala Asp Ser Ser Ile Glu Gly Asn Tyr Thr Leu Arg Val Asp  
 455 460 465  
 Cys Thr Pro Leu Met Tyr Ser Leu Val His Asn Leu Thr Lys Glu  
 470 475 480  
 Leu Lys Ser Pro Asp Glu Gly Phe Glu Gly Lys Ser Leu Tyr Glu  
 485 490 495  
 Ser Trp Thr Lys Lys Ser Pro Ser Pro Glu Phe Ser Gly Met Pro  
 500 505 510  
 Arg Ile Ser Lys Leu Gly Ser Gly Asn Asp Phe Glu Val Phe Phe  
 515 520 525  
 Gln Arg Leu Gly Ile Ala Ser Gly Arg Ala Arg Tyr Thr Lys Asn  
 530 535 540  
 Trp Glu Thr Asn Lys Phe Ser Gly Tyr Pro Leu Tyr His Ser Val  
 545 550 555  
 Tyr Glu Thr Tyr Glu Leu Val Glu Lys Phe Tyr Asp Pro Met Phe  
 560 565 570

Lys Tyr His Leu Thr Val Ala Gln Val Arg Gly Gly Met Val Phe  
 575 580 585  
 Glu Leu Ala Asn Ser Ile Val Leu Pro Phe Asp Cys Arg Asp Tyr  
 590 595 600  
 Ala Val Val Leu Arg Lys Tyr Ala Asp Lys Ile Tyr Ser Ile Ser  
 605 610 615  
 Met Lys His Pro Gln Glu Met Lys Thr Tyr Ser Val Ser Phe Asp  
 620 625 630  
 Ser Leu Phe Ser Ala Val Lys Asn Phe Thr Glu Ile Ala Ser Lys  
 635 640 645  
 Phe Ser Glu Arg Leu Gln Asp Phe Asp Lys Ser Asn Pro Ile Val  
 650 655 660  
 Leu Arg Met Met Asn Asp Gln Leu Met Phe Leu Glu Arg Ala Phe  
 665 670 675  
 Ile Asp Pro Leu Gly Leu Pro Asp Arg Pro Phe Tyr Arg His Val  
 680 685 690  
 Ile Tyr Ala Pro Ser Ser His Asn Lys Tyr Ala Gly Glu Ser Phe  
 695 700 705  
 Pro Gly Ile Tyr Asp Ala Leu Phe Asp Ile Glu Ser Lys Val Asp  
 710 715 720  
 Pro Ser Lys Ala Trp Gly Glu Val Lys Arg Gln Ile Tyr Val Ala  
 725 730 735  
 Ala Phe Thr Val Gln Ala Ala Ala Glu Thr Leu Ser Glu Val Ala  
 740 745 750

<210> 5  
 <211> 28  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> sense primer designed for only amplifying  
 the first intron of the PSMA-like gene on  
 chromosome 11q

<400> 5 28  
 gccttcattt tcagaacatc tcatgcat



<210> 6  
 <211> 25  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> antisense primer designed for only  
 amplifying the first intron of the PSMA-  
 like gene on chromosome 11q

<400> 6  
 gtccatataa actttcaaga atgtg 25

<210> 7  
 <211> 20  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 2)

<400> 7  
 ctcacctaata gtcagaggta 20

<210> 8  
 <211> 20  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 2)

<400> 8  
 agtatagtcc tcctcagatg 20

<210> 9  
 <211> 24  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 3)

<400> 9  
 caaagtactt ttgtgtaact ctgc 24

<210> 10  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence

β<sub>1</sub>

<220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 3)

<400> 10  
 cataggaaag tagttgacac gg 22

<210> 11  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 4)

<400> 11  
 cctgaaggat tcattcaccc tc 22

<210> 12  
 <211> 24  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon

intronic sequences of the PSMA genomic  
clone used to amplify the corresponding  
regions of the PSMA-like gene (exon 4)

<400> 12  
gaccctttaa ttatcggctg aaca 24

<210> 13  
<211> 22  
<212> DNA  
<213> Artificial sequence

<220>  
<221> primer\_bind  
<223> sense oligonucleotide primer based upon  
intronic sequences of the PSMA genomic  
clone used to amplify the corresponding  
regions of the PSMA-like gene (exons 5-6)

B<sub>r</sub>  
<400> 13  
atgtccaaca gtcccatgc ag 22

<210> 14  
<211> 22  
<212> DNA  
<213> Artificial sequence

<220>  
<221> primer\_bind  
<223> antisense oligonucleotide primer based upon  
intronic sequences of the PSMA genomic  
clone used to amplify the corresponding  
regions of the PSMA-like gene (exons 5-6)

<400> 14  
gacatgctta gtccattgta cc 22

<210> 15  
<211> 22  
<212> DNA  
<213> Artificial sequence

<220>  
<221> primer\_bind  
<223> sense oligonucleotide primer based upon  
intronic sequences of the PSMA genomic  
clone used to amplify the corresponding  
regions of the PSMA-like gene (exon 7)

<400> 15  
 gaaccgtttg aatgaaactg ag 22  
  
 <210> 16  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence  
  
 <220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 7)

<400> 16  
 ttacccaaat agccatccat gg 22

<210> 17  
 <211> 23  
 <212> DNA  
 <213> Artificial sequence  
  
 <220>  
 <221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exons 8-9)

<400> 17  
 gcagatgctc aataagtga tcc 23

<210> 18  
 <211> 24  
 <212> DNA  
 <213> Artificial sequence  
  
 <220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exons 8-9)

<400> 18  
 ccagcacata acagttactt gatc 24

<210> 19

<211> 22  
 <212> DNA  
 <213> Artificial sequence  
  
 <220>  
 <221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 10)  
  
 <400> 19  
 tagatgctat tgagtcgttt gc 22  
  
 <210> 20  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence  
  
 <220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 10)  
  
 <400> 20  
 aaactgagac tcagataggc tg 22  
  
 <210> 21  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence  
  
 <220>  
 <221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 11)  
  
 <400> 21  
 ctgggcttgg tagtgtcctg gg 22  
  
 <210> 22  
 <211> 24  
 <212> DNA  
 <213> Artificial sequence

<220>  
<221> primer\_bind  
<223> antisense oligonucleotide primer based upon  
intronic sequences of the PSMA genomic  
clone used to amplify the corresponding  
regions of the PSMA-like gene (exon 11)

<400> 22  
gcttggcaaa caagtcctgg ctac 24

<210> 23  
<211> 22  
<212> DNA  
<213> Artificial sequence

B,  
<220>  
<221> primer\_bind  
<223> sense oligonucleotide primer based upon  
intronic sequences of the PSMA genomic  
clone used to amplify the corresponding  
regions of the PSMA-like gene (exon 12)

<400> 23  
tgtcgtaat atgggtcagc tc 22

<210> 24  
<211> 22  
<212> DNA  
<213> Artificial sequence

<220>  
<221> primer\_bind  
<223> antisense oligonucleotide primer based upon  
intronic sequences of the PSMA genomic  
clone used to amplify the corresponding  
regions of the PSMA-like gene (exon 12)

<400> 24  
ttaactagac tgctgctcct ag 22

<210> 25  
<211> 22  
<212> DNA  
<213> Artificial sequence

<220>  
<221> primer\_bind  
<223> sense oligonucleotide primer based upon  
intronic sequences of the PSMA genomic

clone used to amplify the corresponding  
regions of the PSMA-like gene (exon 13)

<400> 25  
tggttaggaat ttagcagtgg tc 22

<210> 26  
<211> 22  
<212> DNA  
<213> Artificial sequence

<220>  
<221> primer\_bind  
<223> antisense oligonucleotide primer based upon  
intronic sequences of the PSMA genomic  
clone used to amplify the corresponding  
regions of the PSMA-like gene (exon 13)

B1

<400> 26  
gatgctacta atgggctacc tc 22

<210> 27  
<211> 22  
<212> DNA  
<213> Artificial sequence

<220>  
<221> primer\_bind  
<223> sense oligonucleotide primer based upon  
intronic sequences of the PSMA genomic  
clone used to amplify the corresponding  
regions of the PSMA-like gene (exon 14)

<400> 27  
cttctgggta atggacatct ag 22

<210> 28  
<211> 22  
<212> DNA  
<213> Artificial sequence

<220>  
<221> primer\_bind  
<223> antisense oligonucleotide primer based upon  
intronic sequences of the PSMA genomic  
clone used to amplify the corresponding  
regions of the PSMA-like gene (exon 14)

<400> 28  
caatcccaca ctgaattcag tg 22

<210> 29  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 15)

<400> 29  
 agaatggggt ttagtttaat gg 22

<210> 30  
 <211> 21  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 15)

<400> 30  
 tgagtcactt tttggagtca g 21

<210> 31  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exons 16-17)

<400> 31  
 ttgtaagcta tccctataag ag 22

<210> 32  
 <211> 22



<212> DNA  
 <213> Artificial sequence  
  
 <220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exons 16-17)  
  
 <400> 32  
 agttcagcaa cagtcatggt ag 22  
  
 <210> 33  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence  
  
 <220>  
 <221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 18)  
  
 <400> 33  
 ggggtggctcct gaaaccaatc cc 22  
  
 <210> 34  
 <211> 21  
 <212> DNA  
 <213> Artificial sequence  
  
 <220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 18)  
  
 <400> 34  
 gtgatattac agaaaggagt c 21  
  
 <210> 35  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence  
  
 <220>

<221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 19)

<400> 35  
 atccaggaat tgcagagtgc tc 22

<210> 36  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 19)

<400> 36  
 ttcagtttta atccataggg ag 22

<210> 37  
 <211> 24  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> sense primer (exon 10) used for performing  
 PCR on cDNAs from various tissues

<400> 37  
 acagatatgt cattctggga ggtc 24

<210> 38  
 <211> 24  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> antisense primer (exon 16) used for  
 performing PCR on cDNAs from various  
 tissues

<400> 38  
 actgtgatac agtggatagc cgct 24